

REMARKS

Favorable reconsideration of this application is requested. Claims 1 and 2 are pending in this application. Claim 1 has been amended as supported, for example, at page 8, lines 2-10 of the specification.

Claim Rejections - 35 USC § 102

Claims 1 and 2 have been rejected under 35 U.S.C. 102(b) as being anticipated by Shimakawa et al., US Patent 5,817,435. Applicants respectfully traverse this rejection.

Shimakawa considers factors such as the composition of resin to be used for a battery casing and enhancing the mechanical strength such as a creep property, izod impact, and stiffness, in order to suppress the battery casing from destruction by creep deformation or fatigue after a long-term use of a battery made of resin or repetitive charging/discharging. Shimakawa discusses varying the composition of the material for the battery casing, the size and mechanical strength of the end plates and the binding members in a battery module in accordance with the expansion force of the electrode groups and the number of stacked cells, in order to suppress the expansion and deformation of the battery casing.

In contrast, the present invention solves a different problem caused by a conventional binding type in which a plurality of cells are bound with end plates to form one combined battery. The present invention suppresses irreversible deformation of the battery container by requiring the cells to be bound in such a manner that a balance position P between an expanded cell and a compressed cell in an F-S curve of cells to be bound is set to be equal to or lower than a threshold value at which no more than a predetermined amount of irreversible deformation is caused in the battery container. The binding force used in the product of the invention is determined based on the number and compressibility of the cells and the stiffness of the battery container.

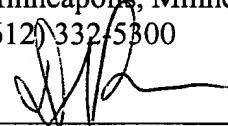
Shimakawa fails to teach or even suggest a combined battery in which the binding force is selected by considering the balance position between an expanded cell and a compressed cell from the F-S curve, based on the number and compressibility of the cells and the stiffness of the battery container.

For at least this reason, claim 1 is believed to be patentable over Shimakawa. Claim 2 is believed to be patentable over Shimakawa for at least the same reason claim 1 is.

In view of the above amendments and remarks, Applicants respectfully request the reconsideration and reexamination of this application and the timely allowance of the pending claims. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,

MERCHANT & GOULD P.C.
P.O. Box 2903
Minneapolis, Minnesota 55402-0903
(612) 332-5300


Douglas P. Mueller
Reg. No. 30,300
DPM:AS:jt

Date: March 14, 2004

23552

PATENT TRADEMARK OFFICE